

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

UNITHERM FOOD SYSTEMS INCORPORATED
1108 WEST HARTFORD
PONCA CITY, OKLAHOMA 74601
TELEPHONE: 405-762-0197
X: 405-762-0199



A WORLD OF STAINLESS STEEL PRODUCTS

July 17, 1996

Mr. Scott Christiansen
JENNIE-O TURKEY PRODUCTS
2505 Willmar Ave., South West
Willmar, MN 56201

Via Fax # 320-231-7185

RE: Quote #334JG

Dear Scott:

We have successfully implemented a casing removal and rinse station at Thorn Apple Valley's new facility in Ponca City, Oklahoma. Their application is targeted specifically for a 72" slicing log. The casing is first rinsed with a medium-pressure spray through a sparge ring and then slit to allow removal by hand. Both operations are automatic and are conveyor-driven.

We have proven that the principle does, indeed, work. We would apply the same principle, with the following modifications, to a system that is specific to JENNIE-O's requirements. It is as follows:

- 1) The cooked product, still in a casing, would be deposited by hand onto a flighted conveyor. The conveyor would move the product to an injection station where filtered air would be injected into the casing to inflate it and release it from the product. **It is important to note that this process can be done with chilled product or product straight from the oven. This would reduce manpower requirements and processing time.**
- 2) The product with its inflated casing would then be conveyed through a pre-rinse that would remove any contamination from the chilling process. (This could be eliminated if the product comes directly from the cookhouse.)
- 3) The conveyor would then drive the product through a series of tensioned, roller-guided pivoting knives that would follow the contour of the product.

U-04908

PTO-003997

This operation is similar to that found in a car wash in which the brushes follow the auto's contour by tensioning wheels.

- 4) The casing would then be removed by hand. This is a process that would require simply removing pieces of previously-separated casing from the product, without requiring the product to be removed from the belt.
- 5) The product would then be conveyed to a wash and rinse chamber where a temperature- and pressure-controlled water sparge would remove any gelatin and purge buildup. **This is the key to uniform browning and coloring with minimum yield loss. Gelatin and purge merely retard the browning process due to moisture entrapment.**
- 6) Finally, the product would be conveyed to a netting area and deposited into a net for further processing.

Scott, you indicated that 8 people were currently needed to accomplish the above operations. As described above, you would need 3 -- one to initially load the belt, one to remove spent casings, and one to remove the netted product for further processing.

As detailed above, the equipment would be capable of 20 pieces per minute, and would occupy a footprint of 3' wide and 10' long. The price of this semi-automatic system, as described, would be \$185,000.

The benefits are many:

- Elimination of 5 personnel positions.
- Elimination of movements related to carpal tunnel syndrome and related medical expenses associated with C.T.S.
- Elimination of the chilling process prior to browning or smoking.
- Reduction of smoking and browning time due to heated product being used.
- Reduced contamination risks.

We are also able to offer variations on the above, such as bypassing the netting station for optimum flexibility; a fully robotic unit that, in addition to slitting and purge removal, would also remove the spent casing; and interfacing a liquid smoke dip with our RapidFlow II Convection Oven for 10-minute smoking and 5-minute browning times and a liquid nitrogen shower to deliver a fully smoked or browned product at a packaging temperature of 45° F. The described operation is based on 12,000 pounds per hour.

We would budget the fully robotic unit at \$450,000.

For the semi-automatic system, we would need a purchase order and a 30% deposit to begin engineering, a 60% progress payment prior to shipping from our factory, and the

U-04909

PTO-003998

July 17, 1996

remaining 10% within 30 days of installation. No fabrication would commence until engineering drawings were approved by JENNIE-O. We would encourage your engineers to visit our facility during fabrication to view and approve the progress. The unit would be fully assembled and tested in our facility prior to shipping, and would be approved by JENNIE-O at this point. You are assured of a fully functional assembly when it arrives at your plant.

For the fully robotic system, we would require a purchase order and 1.5% of the budgeted amount to proceed with engineering drawings. Once the drawings were approved by JENNIE-O, 30% of the actual contract amount, less any monies received for engineering work, would be due as a fabrication deposit. Our standard terms (60% / 10%, as described above) would then apply. All pricing is F.O.B. Ponca City, Oklahoma. Currently, our shop is at 12 - 16 weeks for fabrication.

I will follow up with you on this proposal on Thursday, July 18, 1996.

Scott, this is a "win-win" proposition, and one that is worthy of a quick decision to proceed.

I trust the above meets with your approval; I look forward to speaking with you on Thursday.

Sincerely,



James A. Gaydusek
Sales Engineer, Cooking Processes

U-04910

PTO-003999

UNITHERM Food Systems, Inc.										Date: 7/19/96
Cooking Trial Data										
Test #	Belt Speed	Cook Time	Product: 13 lb. AVERAGE COOKED		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks	Supplied By: LOUIE MURKOT
			Temperatures C.	Zone 1						
#1	725	10.5	290	N/A			COOK 1/2 HAM		50% SOLUTION 1 MIN	
#2	610	1-11.15 2-11.0	240	N/A			COOK 1/2 HAM		20% SOLUTION 2 MIN	
#3	438	25 MIN	200	N/A			COOK WHOLE		20% SOLUTION 3 MIN.	
#4										
#5										
#6										
NOTES										
#1 EDGES TOO DARK —										
SLOW DOWN BELT, LOWER TEMP FOR #2 BY 50°C										
#2 1ST RUN TOO LIGHT, 2ND RUN OK TOTAL COOK 22 MIN.										
#3 TEMP 200, SPEED 438, SOAK 20% 3 MIN — (WHOLE) / 2ND SPEED 910										
#4										
#5										
#6										

UNITHERM FOOD SYSTEMS INCORPORATED
1108 WEST HARTFORD
PONCA CITY, OKLAHOMA 74601
TELEPHONE: 405-762-0197
FAX: 405-762-0199

FAXED



A WORLD OF STAINLESS STEEL PRODUCTS

August 06, 1996

Mr. Gerry Johnson
CAROLINA TURKEYS
P. O. Box 589
Mt Olive, NC 28365

Via Fax # 919-658-2954

RE: Quote # 351JG

Dear Gerry:

Please find enclosed specifications and a service drawing on our RapidFlow II Convection Oven and a Liquid Smoke Dip, as per our conversation. The hard copy will follow.

As per our conversations on site, we have budgeted \$270,000 for the Two-Zone RapidFlow Oven and an additional \$30,000 for the Liquid Smoke Dip.

If I can be of further assistance, please call.

Sincerely,

Jim Gaydusek

PTO-004001

U-05212

UNITHERM RapidFlow II Convection Oven**Process Parameters**

Product:	Turkey Crowns
Initial Temperature:	40° F
Browning Temperature:	575° F
Residence Time:	6 - 12 minutes Average of 10 minutes
Steam Injection:	None
Anticipated Yield:	98% average
Anticipated Throughput:	8,640 units per 16-hour day

UNITHERM RAPIDFLOW II CONTINUOUS CONVECTION OVEN
RF2-1500

Belt Height:	40" (Standard)
Belt Width:	40"
Belt Type:	Flat flex wire belt
Overall Length:	30'-6", including Liquid Smoke Dip
Cooking Length:	17'-3"
Drive Motors:	1 each, SEW geared motor. IP 55 (1.3kW)
Belt Speed Range:	1 minute minimum; 3 hour maximum
Circulation Fans:	6 each, stainless steel impeller (6 x 0.75 kW) fixed speed. Balanced by UNITHERM to provide even heat across entire width.

U-05213

PTO-004002

Steam Injection System: (Available but not used for smoking or browning)	Into cooking chamber. Nominally 175 lbs per hour maximum at 20 PSI dry saturated. (Independently controllable.)
Extraction Fan:	2 each, Bifurcated 2000 cfm variable (0.75 kW). Stainless steel construction.
Belt Washer (Continuous):	High pressure (275 PSI) pump. Adjustable weir plate within washer to regulate water usage / effluent discharge. Pump close-coupled to 15 kW drive motor.
Heating System:	<p>Comprised of 48 x 2 kW finned uncalloy elements per zone. Elements designed to maximize efficient heat transfer (192 kW total heating load).</p> <p>Elements controlled via electronic thyristor drive to maximize energy efficiency. To maximize start-up time, full energy usage allows the oven to reach maximum temperature (650° F) within 10 minutes from cold.</p> <p>PID temperature controllers within each zone allow accurate set point control of +/- 2° F.</p>
Fire Protection Systems:	Operated by a solid-state, approved fire detector (Fenwal). Twin systems, steam at nominally 65 PSI to flood the lower chamber and cooking area. Mains water into the oven top canopy. Pressure switches ensure pressure available to allow machine to operate.
General Construction:	<p>All AISI 304 stainless steel. Main framework constructed from 1-1/2" x 1-1/2". Inner chamber allowed to "Free Float" for expansion purposes. Height adjustable, self-leveling feet fitted. Outer canopies hinged to allow cleaning. During hygiene all belt support rods are easily removed and refitted.</p> <p>Fat collection tray in the lower cooker chamber with a 3"-diameter outfeed pipe to drain / collection system. Baffle plates on circulation fans are removable for hygiene. All pipework has de-mountable fitting to allow for hygiene.</p>
Control Panel:	Stainless steel IP 65, clear macrolon cover over door furniture and controllers. Visual display of temperature in

U-05214

PTO-004003

each zone. Visual display of belt speed (frequency).
General control gear Telemechanique.

All Up Power Requirements:

Heating System:	192 kW
Circulation Fans:	3 kW
Extraction Fans:	2 kW
Belt Washers:	15 kW
Controls, etc.	2 kW
Drive Motors:	4 kW
Total:	<u>219 kW</u>

Running Costs

During start-up (10 minutes), 100% power is required during normal operation; the thyristor drive modulates the load to nominally 30% of the P.L.C., which equates to 115 kW. Given an industrial cost per kWh of 7 cents, this gives a running cost of nominally \$6.27 per hour.

Costs for maintenance are minimal. A weekly check of all components will take 1 hour, due to the "Maintenance Friendly" design of the machine

Costs for machine operation are difficult to quantify; however, the machine does not require any further operator input after the machine is stabilized after start-up.

Commercial Notes

Installation includes the following:

- Mechanical erection and leveling
- Electrical interconnection using stainless steel and flexible conduit
- Functional testing of all systems
- Fire suppression system testing

U-05215

PTO-004004

Exclusions

Civil engineering work
Ducting from top of extract fans through roof space
Service connections (mains: electric, steam, water, drains)

Commissioning

Commissioning will commence upon completion of installation.
Commissioning is charged at \$50 per hour for all hours worked, including traveling.
Out-of-pocket expenses and hotels will be charged at cost or, if preferred, settled directly by the client.
Signed time sheets to be submitted for approval; these form the basis of invoices.

Documentation

Machine will be supplied with one full instruction manual including electrical drawings.

Spares

A comprehensive spares listing with recommended stock holding will be supplied after order placement.

Addendum

Costs incurred by Carolina Turkeys for commissioning engineering expenses will be credited against the purchase price of the oven.

Delivery Lead Time

20 - 24 weeks from receipt of confirmed order and deposit

Installation and Commissioning

Installation will be charged at a flat rate of \$45 for all hours worked; signed time sheets will be submitted for invoicing.

Commissioning will commence after completion of installation and functional testing of all equipment. A flat rate of \$65 per hour will apply.

Delivery Charge to Site

\$ 1,500 Budget

U-05216

PTO-004005

QUOTATION

UNITHERM RAPIDFLOW II RF-2-1500-2-ZONE

Price F.O.B. Ponca City, Oklahoma \$ 270,000 Budget

Add for Liquid Smoke Dip \$ 30,000 Budget

Payment Terms

30% Deposit with confirmed order
60% Prior to shipment from our factory
10% Due within 30 days after commissioning

UNITHERM STANDARD TERMS AND CONDITIONS OF SALE APPLY

U-05217

PTO-004006

SERVICE REQUIREMENTS

ELECTRICAL:-

480V 3 PHASE, NEUTRAL & EARTH
CABLES TO BE CAPABLE OF CARRYING
450 AMPS PER PHASE MINIMUM.

WATER FOR FIRE SYSTEM:-

3/4" N.P.T MAX FLOW AT
3 BAR MINIMUM (45 P.S.I.)

WATER FOR BELT WASH:-

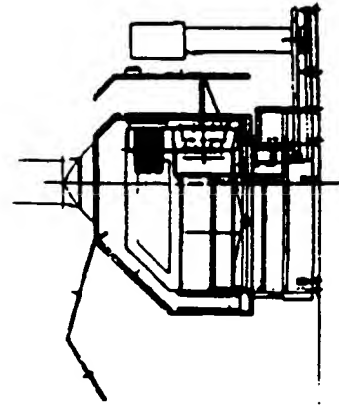
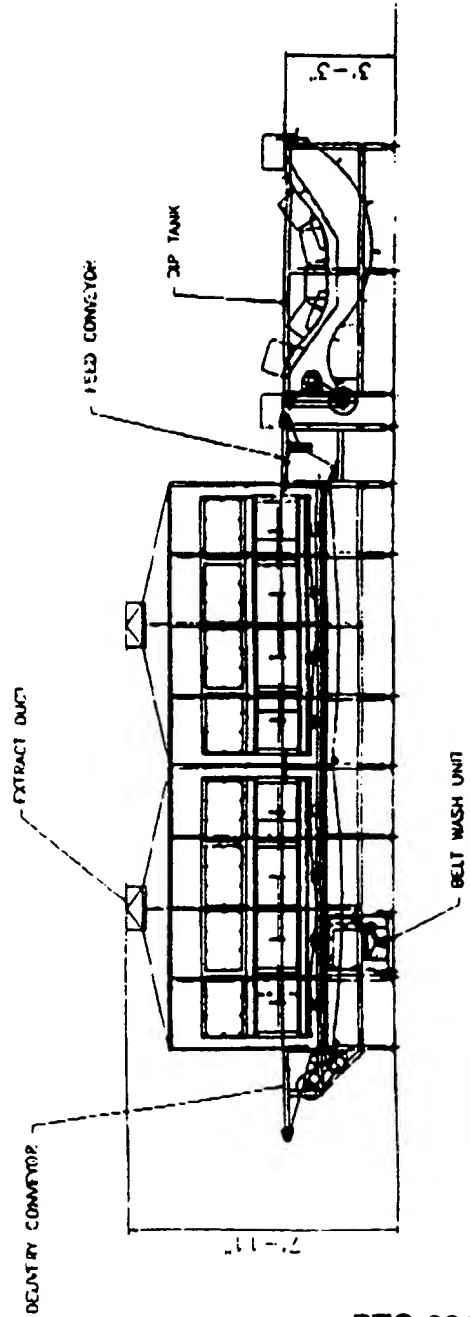
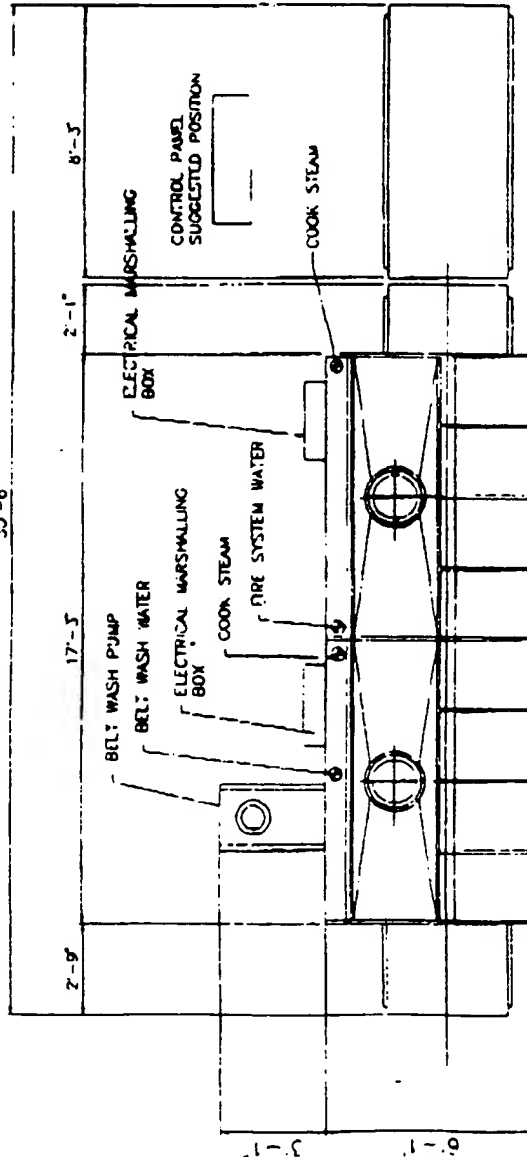
1/2" N.P.T AT 3 BAR (45 P.S.I.)
90 GALS TO FILL

STEAM FOR COOKING:-

110 lbs / HOUR AT
3 BAR (45 P.S.I.)
2 POSITIONS

DUCTING FROM EXTRACT FANS:-

15.75" I/D
FLANGE CONNECTION
O/D 19.1", I/D 15.75", 8 HOLES
1/2" DIA. ON A 1 1/4" P.C.D.



UNITHERM Food Systems, Inc.										Date: July 01, 1996	
Cooking Trial Data				Product: 8# Turkey Crowns - Net on						Supplied By: Jennie-O	
Test #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks		
			Zone 1	Zone 2							
1	15.6 hz	18M	190								
2	37.99 hz	16M	190								
3A	37.99 hz									Cut in half	
3B	37.99 hz									Cut in half	
4A		36M	150		Atomized at beginning						
4B		36M	150		Atomized at beginning & midpoint					Drenched @ 18M	
NOTES											
#1	Straight Charcol Select 24P - poured over netted crown and allowed to set 2 minutes then drenched again; net stretched tight. Very golden/brown										
	Net appearance beginning to show -- too dark, though										
#2	Dipped the net in straight Select 24P and put on product. Decreased cook time to 6 minutes -- observed little netting outline. Smoke is still										
	very wet; will dilute smoke to 50% & retry #1										
#3A	Duplicated #1 @ 50% smoke solution (8 min.) -- starting to turn color (16 M). Getting more color, but still wet 24 min.) Drying out smok (32 min.)										
	Meat is cooking, not browning -- too dark in color.										
#3B	Duplicated #3A but drenched again @ 16 min. -- (24 min.); pattern on vertical surfaces indicates too much liquid										

U-05685

PTO-003991

UNITHERM STAINLESS STEEL INC.			PRODUCT: <u>NET ON</u>			SUPPLIED BY: <u>JENNIE D</u>		DATE: <u>7/1/96</u>		
COOKING TRIAL DATA SHEET										
TEST No.	BELT SPEED	COOK TIME	TEMPERATURES °C			START WEIGHT	COOKED WEIGHT	YIELD	INTERNAL TEMP. °F	REMARKS
			ZONE 1	ZONE 2	ZONE 3					
1	15.6 Hz 18 m	18 m	190			CHICK 1/6 FOR COLOR 1/2 NETTED APPEARANCE				- NO YIELD DONE
2	4"42 SMAX 37.79 Hz	16 m	190			"	"	"		"
3A	"									cut in half
3B	"									
4A		36 m	150°			along on at beginning				
4B		36 m	150°			along at beginning + midpoint				Reached @ 18 m
5A										
5B										
6A										
6B										
NOTES										
#1	STRAIGHT CHARSOL SEAR 2UP - Poured over NETTED CROWN AND ALLOWED TO SET 2 minutes, NET SMOKED TIGHT. VERY GOLDEN/BROWN - NET APPEARANCE BEGINNING TO SHOW - TOO DARK THOUGH -									
#2	@ 1400 THE NET IN SMOKE SEAR 2UP AND PUT ON THE PLOUGH. DECREASED COOK TIME TO 6 minutes - OBSERVED LITTLE NETTING ON BELTLINE. SMOKE IS STILL VERY WET. WILL DILUTE SMOKE TO 50% AND RETRY #1									
3A	DUPLICATED #1 @ 50% SMOKE SUPPLY (8 min) - starting to turn color (16 min) - setting more color, but still wet - 24 min (24 min) - Drying not the smoke (32 min) - Next to ending, not browning - too little in color									
3B	DUPLICATED #3A BUT DECREASED AGAIN @ 16 min - (24 min) - Pattern on vertical surfaces indicates too much liquid									
4A										
4B										

Dried
 WASHED
 60-70-80-90-100-110-120-130-140-150-160-170-180-190-200-210-220-230-240-250-260-270-280-290-300-310-320-330-340-350-360-370-380-390-400-410-420-430-440-450-460-470-480-490-500-510-520-530-540-550-560-570-580-590-600-610-620-630-640-650-660-670-680-690-700-710-720-730-740-750-760-770-780-790-800-810-820-830-840-850-860-870-880-890-900-910-920-930-940-950-960-970-980-990-1000-1010-1020-1030-1040-1050-1060-1070-1080-1090-1100-1110-1120-1130-1140-1150-1160-1170-1180-1190-1200-1210-1220-1230-1240-1250-1260-1270-1280-1290-1300-1310-1320-1330-1340-1350-1360-1370-1380-1390-1400-1410-1420-1430-1440-1450-1460-1470-1480-1490-1500-1510-1520-1530-1540-1550-1560-1570-1580-1590-1600-1610-1620-1630-1640-1650-1660-1670-1680-1690-1700-1710-1720-1730-1740-1750-1760-1770-1780-1790-1800-1810-1820-1830-1840-1850-1860-1870-1880-1890-1900-1910-1920-1930-1940-1950-1960-1970-1980-1990-2000-2010-2020-2030-2040-2050-2060-2070-2080-2090-2100-2110-2120-2130-2140-2150-2160-2170-2180-2190-2200-2210-2220-2230-2240-2250-2260-2270-2280-2290-2300-2310-2320-2330-2340-2350-2360-2370-2380-2390-2400-2410-2420-2430-2440-2450-2460-2470-2480-2490-2500-2510-2520-2530-2540-2550-2560-2570-2580-2590-2600-2610-2620-2630-2640-2650-2660-2670-2680-2690-2700-2710-2720-2730-2740-2750-2760-2770-2780-2790-2800-2810-2820-2830-2840-2850-2860-2870-2880-2890-2900-2910-2920-2930-2940-2950-2960-2970-2980-2990-3000-3010-3020-3030-3040-3050-3060-3070-3080-3090-3100-3110-3120-3130-3140-3150-3160-3170-3180-3190-3200-3210-3220-3230-3240-3250-3260-3270-3280-3290-3300-3310-3320-3330-3340-3350-3360-3370-3380-3390-3400-3410-3420-3430-3440-3450-3460-3470-3480-3490-3500-3510-3520-3530-3540-3550-3560-3570-3580-3590-3600-3610-3620-3630-3640-3650-3660-3670-3680-3690-3700-3710-3720-3730-3740-3750-3760-3770-3780-3790-3800-3810-3820-3830-3840-3850-3860-3870-3880-3890-3900-3910-3920-3930-3940-3950-3960-3970-3980-3990-4000-4010-4020-4030-4040-4050-4060-4070-4080-4090-4100-4110-4120-4130-4140-4150-4160-4170-4180-4190-4200-4210-4220-4230-4240-4250-4260-4270-4280-4290-4300-4310-4320-4330-4340-4350-4360-4370-4380-4390-4400-4410-4420-4430-4440-4450-4460-4470-4480-4490-4500-4510-4520-4530-4540-4550-4560-4570-4580-4590-4600-4610-4620-4630-4640-4650-4660-4670-4680-4690-4700-4710-4720-4730-4740-4750-4760-4770-4780-4790-4800-4810-4820-4830-4840-4850-4860-4870-4880-4890-4900-4910-4920-4930-4940-4950-4960-4970-4980-4990-5000-5010-5020-5030-5040-5050-5060-5070-5080-5090-5100-5110-5120-5130-5140-5150-5160-5170-5180-5190-5200-5210-5220-5230-5240-5250-5260-5270-5280-5290-5300-5310-5320-5330-5340-5350-5360-5370-5380-5390-5400-5410-5420-5430-5440-5450-5460-5470-5480-5490-5500-5510-5520-5530-5540-5550-5560-5570-5580-5590-5600-5610-5620-5630-5640-5650-5660-5670-5680-5690-5700-5710-5720-5730-5740-5750-5760-5770-5780-5790-5800-5810-5820-5830-5840-5850-5860-5870-5880-5890-5900-5910-5920-5930-5940-5950-5960-5970-5980-5990-6000-6010-6020-6030-6040-6050-6060-6070-6080-6090-6100-6110-6120-6130-6140-6150-6160-6170-6180-6190-6200-6210-6220-6230-6240-6250-6260-6270-6280-6290-6300-6310-6320-6330-6340-6350-6360-6370-6380-6390-6400-6410-6420-6430-6440-6450-6460-6470-6480-6490-6500-6510-6520-6530-6540-6550-6560-6570-6580-6590-6600-6610-6620-6630-6640-6650-6660-6670-6680-6690-6700-6710-6720-6730-6740-6750-6760-6770-6780-6790-6800-6810-6820-6830-6840-6850-6860-6870-6880-6890-6900-6910-6920-6930-6940-6950-6960-6970-6980-6990-7000-7010-7020-7030-7040-7050-7060-7070-7080-7090-7100-7110-7120-7130-7140-7150-7160-7170-7180-7190-7200-7210-7220-7230-7240-7250-7260-7270-7280-7290-7300-7310-7320-7330-7340-7350-7360-7370-7380-7390-7400-7410-7420-7430-7440-7450-7460-7470-7480-7490-7500-7510-7520-7530-7540-7550-7560-7570-7580-7590-7600-7610-7620-7630-7640-7650-7660-7670-7680-7690-7700-7710-7720-7730-7740-7750-7760-7770-7780-7790-7800-7810-7820-7830-7840-7850-7860-7870-7880-7890-7900-7910-7920-7930-7940-7950-7960-7970-7980-7990-8000-8010-8020-8030-8040-8050-8060-8070-8080-8090-8100-8110-8120-8130-8140-8150-8160-8170-8180-8190-8200-8210-8220-8230-8240-8250-8260-8270-8280-8290-8300-8310-8320-8330-8340-8350-8360-8370-8380-8390-8400-8410-8420-8430-8440-8450-8460-8470-8480-8490-8500-8510-8520-8530-8540-8550-8560-8570-8580-8590-8600-8610-8620-8630-8640-8650-8660-8670-8680-8690-8700-8710-8720-8730-8740-8750-8760-8770-8780-8790-8800-8810-8820-8830-8840-8850-8860-8870-8880-8890-8900-8910-8920-8930-8940-8950-8960-8970-8980-8990-9000-9010-9020-9030-9040-9050-9060-9070-9080-9090-9100-9110-9120-9130-9140-9150-9160-9170-9180-9190-9200-9210-9220-9230-9240-9250-9260-9270-9280-9290-9300-9310-9320-9330-9340-9350-9360-9370-9380-9390-9400-9410-9420-9430-9440-9450-9460-9470-9480-9490-9500-9510-9520-9530-9540-9550-9560-9570-9580-9590-9600-9610-9620-9630-9640-9650-9660-9670-9680-9690-9700-9710-9720-9730-9740-9750-9760-9770-9780-9790-9800-9810-9820-9830-9840-9850-9860-9870-9880-9890-9900-9910-9920-9930-9940-9950-9960-9970-9980-9990-10000-10010-10020-10030-10040-10050-10060-10070-10080-10090-10100-10110-10120-10130-10140-10150-10160-10170-10180-10190-10200-10210-10220-10230-10240-10250-10260-10270-10280-10290-10300-10310-10320-10330-10340-10350-10360-10370-10380-10390-10400-10410-10420-10430-10440-10450-10460-10470-10480-10490-10500-10510-10520-10530-10540-10550-10560-10570-10580-10590-10600-10610-10620-10630-10640-10650-10660-10670-10680-10690-10700-10710-10720-10730-10740-10750-10760-10770-10780-10790-10800-10810-10820-10830-10840-10850-10860-10870-10880-10890-10900-10910-10920-10930-10940-10950-10960-10970-10980-10990-11000-11010-11020-11030-11040-11050-11060-11070-11080-11090-11100-11110-11120-11130-11140-11150-11160-11170-11180-11190-11200-11210-11220-11230-11240-11250-11260-11270-11280-11290-11300-11310-11320-11330-11340-11350-11360-11370-11380-11390-11400-11410-11420-11430-11440-11450-11460-11470-11480-11490-11500-11510-11520-11530-11540-11550-11560-11570-11580-11590-11600-11610-11620-11630-11640-11650-11660-11670-11680-11690-11700-11710-11720-11730-11740-11750-11760-11770-11780-11790-11800-11810-11820-11830-11840-11850-11860-11870-11880-11890-11900-11910-11920-11930-11940-11950-11960-11970-11980-11990-12000-12010-12020-12030-12040-12050-12060-12070-12080-12090-12100-12110-12120-12130-12140-12150-12160-12170-12180-12190-12200-12210-12220-12230-12240-12250-12260-12270-12280-12290-12300-12310-12320-12330-12340-12350-12360-12370-12380-12390-12400-12410-12420-12430-12440-12450-12460-12470-12480-12490-12500-12510-12520-12530-12540-12550-12560-12570-12580-12590-12600-12610-12620-12630-12640-12650-12660-12670-12680-12690-12700-12710-12720-12730-12740-12750-12760-12770-12780-12790-12800-12810-12820-12830-12840-12850-12860-12870-12880-12890-12900-12910-12920-12930-12940-12950-12960-12970-12980-12990-13000-13010-13020-13030-13040-13050-13060-13070-13080-13090-13100-13110-13120-13130-13140-13150-13160-13170-13180-13190-13200-13210-13220-13230-13240-13250-13260-13270-13280-13290-13300-13310-13320-13330-13340-13350-13360-13370-13380-13390-13400-13410-13420-13430-13440-13450-13460-13470-13480-13490-13500-13510-13520-13530-13540-13550-13560-13570-13580-13590-13600-13610-13620-13630-13640-13650-13660-13670-13680-13690-13700-13710-13720-13730-13740-13750-13760-13770-13780-13790-13800-13810-13820-13830-13840-13850-13860-13870-13880-13890-13900-13910-13920-13930-13940-13950-13960-13970-13980-13990-14000-14010-14020-14030-14040-14050-14060-14070-14080-14090-14100-14110-14120-14130-14140-14150-14160-14170-14180-14190-14200-14210-14220-14230-14240-14250-14260-14270-14280-14290-14300-14310-14320-14330-14340-14350-14360-14370-14380-14390-14400-14410-14420-14430-14440-14450-14460-14470-14480-14490-14500-14510-14520-14530-14540-14550-14560-14570-14580-14590-14600-14610-14620-14630-14640-14650-14660-14670-14680-14690-14700-14710-14720-14730-14740-14750-14760-14770-14780-14790-14800-14810-14820-14830-14840-14850-14860-14870-14880-14890-14900-14910-14920-14930-14940-14950-14960-14970-14980-14990-15000-15010-15020-15030-15040-15050-15060-15070-15080-15090-15100-15110-15120-15130-15140-15150-15160-15170-15180-15190-15200-15210-15220-15230-15240-15250-15260-15270-15280-15290-15300-15310-15320-15330-15340-15350-15360-15370-15380-15390-15400-15410-15420-15430-15440-15450-15460-15470-15480-15490-15500-15510-15520-15530-15540-15550-15560-15570-15580-15590-15600-15610-15620-15630-15640-15650-15660-15670-15680-15690-15700-15710-15720-15730-15740-15750-15760-15770-15780-15790-15800-15810-15820-15830-15840-15850-15860-15870-15880-15890-15900-15910-15920-15930-15940-15950-15960-15970-15980-15990-16000-16010-16020-16030-16040-16050-16060-16070-16080-16090-16100-16110-16120-16130-16140-16150-16160-16170-16180-16190-16200-16210-16220-16230-16240-16250-16260-16270-16280-16290-16300-16310-16320-16330-16340-16350-16360-16370-16380-16390-16400-16410-16420-16430-16440-16450-16460-16470-16480-16490-16500-16510-16520-16530-16540-16550-16560-16570-16580-16590-16600-16610-16620-16630-16640-16650-16660-16670-16680-16690-16700-16710-16720-16730-16740-16750-16760-16770-16780-16790-16800-16810-16820-16830-16840-16850-16860-16870-16880-16890-16900-16910-16920-16930-16940-16950-16960-16970-16980-16990-17000-17010-17020-17030-17040-17050-17060-17070-17080-17090-17100-17110-17120-17130-17140-17150-17160-17170-17180-17190-17200-17210-17220-17230-17240-17250-17260-17270-17280-17290-17300-17310-17320-17330-17340-17350-17360-17370-17380-17390-17400-17410-17420-17430-17440-17450-17460-17470-17480-17490-17500-17510-17520-17530-17540-17550-17560-17570-17580-17590-17600-17610-17620-17630-17640-17650-17660-17670-17680-17690-17700-17710-17720-17730-17740-17750-17760-17770-17780-17790-17800-17810-17820-17830-17840-17850-17860-17870-17880-17890-17900-17910-17920-17930-17940-17950-17960-17970-17980-17990-18000-18010-18020-18030-18040-18050-18060-18070-18080-18090-18100-18110-18120-18130-18140-18150-18160-18170-18180-18190-18200-18210-18220-18230-18240-18250-18260-18270-18280-18290-18300-18310-18320-18330-18340-18350-18360-18370-18380-18390-18400-18410-18420-18430-18440-18450-18460-18470-18480-18490-18500-18510-18520-18530-18540-18550-18560-18570-18580-18590-18600-18610-18620-18630-18640-18650-18660-18670-18680-18690-18700-18710-18720-18730-18740-18750-18760-18770-18780-18790-18800-18810-18820-188

UNITHERM Food Systems, Inc.										Date: July 02, 1996	
Cooking Trial Data										Objective: To duplicate net line effect	
Product: 8# Turkey Crowns - Nets on										Supplied By: Jennie-O	
Test #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks		
			Zone 1	Zone 2							
1		13 min.	190	25% smoke mist							
1A	23.56 hz	20 min.	170	25% smoke mist							
2A	23.56 hz	30 min.	150	10% smoke mist							
2B	23.56 hz	30 min.	100	10% smoke mist							
3A	81.76 hz	6 min.	280	25% smoke mist							
3B	68.8 hz	9 min.	280	25% smoke mist							
NOTES											
#1	Washed & netted product; made 6 min. pass to dry out, misted w/ 24P, ran through 7 min. Too hot; not enough time.										
#1A	Same as above w/ 10 preheat & 10 brown - hot spots. Results: no noticeable pattern.										
#2A	20 preheat & 10 brown; Pattern becoming evident, but still too dark										
#2B	10 preheat & 20 brown; very little coloration; needs 10-15 min. more										
#3A	3 preheat & 3 brown; no netlines; too dark										
#3B	3 preheat & 6 brown; same as above; still no netlines										
Suggest - 100 degrees; 20 heat & 10/20 brown - 25% smoke or ? - call Red arrow											

U-05686

PTO-003993

UNITHERM Food Systems, Inc.										Date: July 2 1996
Cooking Trial Data										Objective: TO Duplicate BEST LINE EFFECT
Product: Turkey Cans (NETS ON)										Supplied By: JENNIE - O FOODS
Test #	Belt	Cook	Temperatures C.		Start	Cooked	Yield	Internal	Remarks	
	Speed	Time	Zone 1	Zone 2	Weight	Weight		Temp. F.		
1	2.54-3102	6 min	190	25% Smoke	MIST				UPPER 25% NOTED THE PROPOSE - MADE 1 PASS TO DRY OUT. MISTED WITH 24P - RAW THROUGH PLAIN FOR SAME. TOO HOT, NOT ENOUGH TIME	
1A	23.56 Hz	10 Heat	170	25% Smoke	MIST				(SAME AS ABOVE) - HOT SPOTS	
2A	"	20 Heat	150	10% Smoke	MIST				Regains = NO noticeable pattern, but pattern becoming evident, for 5 min too dark	
2B	"	20 Heat	100	10% Smoke	MIST				very little coloration needs 10-5 minutes more	
3A	68.8 Hz	34 min Heat	280	25% Smoke	MIST				NO changes - Too dark	
3B	68.8 Hz	3 min Heat	280	25% Smoke	MIST				Same as above - still no changes	
Suggest -		100°	20 Heat	100	25% Smoke or?	- Call			Red Arrow	

UNITHERM Food Systems, Inc.										Date: <u>July 10 1996</u>
Cooking Trial Data					Product: <u>TURKEY CHICKENS</u>					Supplied By: <u>JENNIE O</u>
Test #	Belt Speed	Cook Time	Temperatures C.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remark	
			Zone 1	Zone 2						
#1	45.0	5:30		280°	N/A	N/A	N/A	N/A	Attempting to duplicate color only at this time	
#2	42	"		"	"	"	"	"	"	
#3	40.34	5:30 6:45		100°	"	"	"	"	Attempting to dry the product, not cook it	
#4										
#5										
#6										
NOTES										
#1	RED Arrow #1 M-15 MESQUITE SMOKE @ 50% HEATED BAST FOR 5:30; NETTED & MISTED ON. BEHIND ARROW 5:30. NETTING MARKS NOT EVIDENT; WET SURFACE, SEEMED LIKE TOO HEAVY LIQUID									
#2	NETTED AND MISTED; HEATED FOR 5:30; LIGHT MISTING THIS TIME, RESULTS AFTER 5:30 = 1 HOT SPOT; LITTLE COLOR. NO NET MARKS. SURFACE APPEARS TO BE PENDING FOR FROM THE SKIN.									
#3	HEATED 2x @ 6:45 w/ NET ON; MISTED AND HEATED 1x @ 6:45 - AFTER 306:45 - L570 M-15									
#4										
#5										
#6										

U-03790

PTO-003995

UNITHERM Food Systems, Inc.

Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: 50076 M.L.B.		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remark
			Temperatures C.						
			Zone 1	Zone 2					
#1		21.57 Hz	355°	8.13	7.58	95.59	Chilled ↓	42°F Int 45°F Ext	
#2				8.16	7.89	96.69		116°F Surface 50°F Int	
#3				8.19	7.93	96.83			
#4				8.17	7.94	97.18			
#5				8.03	7.68	95.64			
#6				8.42	8.14	96.67			

NOTES

#1 7.94 7.64 96.22

#2 8.13 7.88 96.72

#3

#4

#5

#6